<u>IN THE CLAIMS</u>:

Please amend claim 10 as follows:

1. (Previously presented) A method of estimating voiced/unvoiced information from a voice input signal, the method comprising :

transforming the voice input signal into an input spectrum having input spectrum energy;

calculating a synthetic spectrum having synthetic spectrum energy using at least one of a fundamental frequency, a harmonic size and a window spectrum;

determining at least one voice level decision band from the input spectrum and the synthetic spectrum;

determining a band spectral difference energy for the at least one voice level decision band by finding the difference between the input spectrum energy and the synthetic spectrum energy;

normalizing the band spectral difference energy with the input spectrum energy to determine a normalized spectra difference energy; and

calculating a voicing level corresponding to the at least one voice level decision band using the normalized spectra difference energy, the voicing level calculated without utilizing a threshold such that a mixture of a voiced element and an unvoiced element are represented.

2. (Original) The method of claim 1, wherein the voicing level is calculated by subtracting the normalized spectra difference energy from 1.

3. (Previously presented) The method of claim 1, wherein the voicing level is determined to be a value between 0 and 1.

4. (Previously presented) The method of claim 1, further comprising determining a plurality of voice level decision bands from the input spectrum and the synthetic spectrum, wherein the voicing level is determined for each of the plurality of voice level decision bands.

5. (Original) The method of claim 4, wherein there are L voice level decision bands, L having a value between 10 and 60.

6. (Original) The method of claim 1, wherein the voice input signal is transformed into the input spectrum having input spectrum energy using Fourier transformation.

7. (Previously presented) A method of estimating voiced/unvoiced information from a voice input signal, the method comprising :

transforming the voice input signal into an input spectrum having input spectrum energy;

obtaining a synthetic spectrum having synthetic spectrum energy using at least one of a fundamental frequency, a harmonic size and a window spectrum;

determining L voice level decision bands from the input spectrum and the synthetic spectrum, wherein L is an integer;

determining a corresponding band spectral difference energy for each voice level decision band by finding the difference between the respective input spectrum energy and the respective synthetic spectrum energy;

normalizing the band spectral difference energy with the input spectrum energy to determine a normalized spectra difference energy for each voice level decision band; and

calculating a voicing level corresponding to the each voice level decision band using the normalized spectra difference energy, the voicing level calculated without utilizing a threshold such that a mixture of a voiced element and an unvoiced element are represented.

8. (Original) The method of claim 7, wherein the voicing level is calculated by subtracting the normalized spectra difference energy from 1.

9. (Previously presented) The method of claim 7, wherein the voicing level is determined to be a value between 0 and 1.

10. (Currently amended) The method of claim $\cancel{1}\underline{7}$, wherein L has a value between 10 and 60.

11. (Previously presented) An estimation system for estimating voiced/unvoiced information from a voice input signal, the estimation system comprising:

means for transforming the voice input signal into an input spectrum having input spectrum energy;

means for obtaining a synthetic spectrum having synthetic spectrum energy using at least one of a fundamental frequency, a harmonic size and a window spectrum;

means for determining at least one voice level decision band from the input spectrum and the synthetic spectrum;

means for determining a band spectral difference energy for the at least one voice level decision band by finding the difference between the input spectrum energy and the synthetic spectrum energy;

means for normalizing the band spectral difference energy with the input spectrum energy to determine a normalized spectra difference energy; and

means for calculating a voicing level corresponding to the at least one voice level decision band using the normalized spectra difference energy, the voicing level calculated without utilizing a threshold such that a mixture of a voiced element and an unvoiced element are represented.

12. (Original) The estimation system of claim 11, wherein the means for calculating the voicing level subtracts the normalized spectra difference energy from 1 to find the voicing level.

13. (Previously presented) The estimation system of claim 11, wherein the voicing level is determined to be a value between 0 and 1.

14. (Previously presented) The estimation system of claim 11, further comprising a plurality of voice level decision bands determined from the input spectrum and the synthetic spectrum, wherein the voicing level is determined for each of the plurality of voice level decision bands.

15. (Original) The estimation system of claim 14, wherein there are L voice level decision bands, L having a value between 10 and 60.

16. (Original) The estimation system of claim 11, wherein the voice input signal is transformed into the input spectrum having input spectrum energy using Fourier transformation.

17. (Previously presented) An estimation system for estimating voiced/unvoiced information from a voice input signal, the estimation system comprising:

means for transforming the voice input signal into an input spectrum having input spectrum energy;

means for obtaining a synthetic spectrum having synthetic spectrum energy using at least one of a fundamental frequency, a harmonic size and a window spectrum;

a spectrum difference calculation unit to determine at least one voice level decision band from the input spectrum and the synthetic spectrum and to determine a band spectral difference energy for the at least one voice level decision band by finding the difference between the input spectrum energy and the synthetic spectrum energy and normalizing the band spectral difference energy with the input spectrum energy to determine a normalized spectra difference energy; and

a voicing level calculation unit to calculate a voicing level corresponding to the at least one voice level decision band using the normalized spectra difference energy, the voicing level calculated without utilizing a threshold such that a mixture of a voiced element and an unvoiced element are represented.

18. (Original) The estimation system of claim 17, wherein the voicing level calculation unit subtracts the normalized spectra difference energy from 1 to find the voicing level.

19. (Previously presented) The estimation system of claim 17, wherein the voicing level is determined to be a value between 0 and 1.

20. (Previously presented) The estimation system of claim 17, wherein a plurality of voice level decision bands is determined from the input spectrum and the synthetic spectrum and the voicing level is determined for each of the plurality of voice level decision bands.